

SEQUENCE LISTING

<110> Yamaguchi, Shotaro

<120> NOVEL PROTEIN-DEAMIDATING ENZYME, MICROORGANISM PRODUCING THE SAME, GENE ENCODING THE SAME, PRODUCTION PROCESS THEREFOR, AND USE THEREOF

<130> A20-128923C

<150> JP Hei. 11-345044

<151> 1999-12-03

<160> 11

<170> PatentIn version 3.0

<210> 1

<211> 20

<212> PRT

<213> Cryseobacterium sp. No. 9670

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Leu Ala Ser Val Ile Pro Asp Val Ala Thr Leu Asn Ser Leu Phe Asn
1 5 10 15

Gln Ile Lys Asn
20

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<213> Cryseobacterium sp. No. 9670

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Ser Pro Ser Asn Ser Tyr Leu Tyr Asp Asn Asn Leu Ile Asn Thr Asn
1 5 10 15

Cys Val Leu Thr
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gcnwsngtna thcngaygt

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 cagtcttgcg gtacctctac ggcgctcctca ccatgcatca cattcagata tctgtagac 120
 ggatgttatg caagagccca taagatgaga caaatcttaa tgaacaacgg ctatgactgt 180
 gaaaaacaat ttgtatacgg aaacctaaag gcatcaacag gaacttgctg tgtggcgtgg 240
 agctaccacg ttgcaatatt ggtaagctat aaaaatgctt ccggagtaac ggaaaaaaga 300
 attattgac cttcactatt ttcaagcggc cctgtaacag atacagcatg gagaaacgct 360
 tgcgttaaca cctcttgogg atctgcatcc gtttctctt atgctaatac tgcaggaaat 420
 gtttattaca gaagtcctag taattcttac ctgtatgaca acaatctgat caataccaac 480
 tgtgtactga ctaaattttc actgctttcc ggatgttctc cttcacctgc accggatgta 540
 tccagctgtg gattt 555

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Leu	Ala	Ser	Val	Ile	Pro	Asp	Val	Ala	Thr	Leu	Asn	Ser	Leu	Phe	Asn
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Gln	Ile	Lys	Asn	Gln	Ser	Cys	Gly	Thr	Ser	Thr	Ala	Ser	Ser	Pro	Cys
			20					25					30		
Ile	Thr	Phe	Arg	Tyr	Pro	Val	Asp	Gly	Cys	Tyr	Ala	Arg	Ala	His	Lys
		35					40					45			
Met	Arg	Gln	Ile	Leu	Met	Asn	Asn	Gly	Tyr	Asp	Cys	Glu	Lys	Gln	Phe
	50					55					60				
Val	Tyr	Gly	Asn	Leu	Lys	Ala	Ser	Thr	Gly	Thr	Cys	Cys	Val	Ala	Trp
65					70				75						80
Ser	Tyr	His	Val	Ala	Ile	Leu	Val	Ser	Tyr	Lys	Asn	Ala	Ser	Gly	Val
			85					90						95	
Thr	Glu	Lys	Arg	Ile	Ile	Asp	Pro	Ser	Leu	Phe	Ser	Ser	Gly	Pro	Val
			100					105					110		
Thr	Asp	Thr	Ala	Trp	Arg	Asn	Ala	Cys	Val	Asn	Thr	Ser	Cys	Gly	Ser
		115					120					125			
Ala	Ser	Val	Ser	Ser	Tyr	Ala	Asn	Thr	Ala	Gly	Asn	Val	Tyr	Tyr	Arg
		130				135					140				
Ser	Pro	Ser	Asn	Ser	Tyr	Leu	Tyr	Asp	Asn	Asn	Leu	Ile	Asn	Thr	Asn
145					150					155					160

Cys Val Leu Thr Lys Phe Ser Leu Leu Ser Gly Cys Ser Pro Ser Pro
165 170 175

Ala Pro Asp Val Ser Ser Cys Gly Phe
180 185

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atg aaa aat ctt ttt tta tca atg atg gcc ttt gtg acc gtc tta 105
Met Lys Asn Leu Phe Leu Ser Met Met Ala Phe Val Thr Val Leu
-135 -130 -125

act ttt aat tcc tgt gcc gat tcc aac ggg aat cag gaa atc aac 150
Thr Phe Asn Ser Cys Ala Asp Ser Asn Gly Asn Gln Glu Ile Asn
-120 -115 -110

gga aag gaa aaa cta agt gta aat gat tct aag ctg aaa gat ttc gga 198
Gly Lys Glu Lys Leu Ser Val Asn Asp Ser Lys Leu Lys Asp Phe Gly
-105 -100 -95 -90

aag act gta ccg gta ggg ata gac gaa gaa aac gga atg ata aag gtg 246
Lys Thr Val Pro Val Gly Ile Asp Glu Glu Asn Gly Met Ile Lys Val
-85 -80 -75

tca ttt atg tta act gcg caa ttc tat gaa att aag ccg acc aaa gaa 294
Ser Phe Met Leu Thr Ala Gln Phe Tyr Glu Ile Lys Pro Thr Lys Glu
-70 -65 -60

aat gag cag tat atc gga atg ctt aga cag gct gtt aag aat gaa tct 342
Asn Glu Gln Tyr Ile Gly Met Leu Arg Gln Ala Val Lys Asn Glu Ser
-55 -50 -45

cct gta cac att ttc tta aag cct aat agc aat gaa ata gga aaa gtg 390
Pro Val His Ile Phe Leu Lys Pro Asn Ser Asn Glu Ile Gly Lys Val
-40 -35 -30

gag tct gca agt ccg gaa gac gta aga tat ttt aaa acg atc ctg aca 438
Glu Ser Ala Ser Pro Glu Asp Val Arg Tyr Phe Lys Thr Ile Leu Thr
-25 -20 -15 -10

aaa gaa gta aaa ggg caa acc aat aaa ttg gcg agt gta att cct gat 486
Lys Glu Val Lys Gly Gln Thr Asn Lys Leu Ala Ser Val Ile Pro Asp

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Met Lys Asn Leu Phe Leu Ser Met Met Ala Phe Val Thr Val Leu
-135 -130 -125

Thr Phe Asn Ser Cys Ala Asp Ser Asn Gly Asn Gln Glu Ile Asn
-120 -115 -110

Gly Lys Glu Lys Leu Ser Val Asn Asp Ser Lys Leu Lys Asp Phe Gly
-105 -100 -95 -90

Lys Thr Val Pro Val Gly Ile Asp Glu Glu Asn Gly Met Ile Lys Val
-85 -80 -75

Ser Phe Met Leu Thr Ala Gln Phe Tyr Glu Ile Lys Pro Thr Lys Glu
-70 -65 -60

Asn Glu Gln Tyr Ile Gly Met Leu Arg Gln Ala Val Lys Asn Glu Ser
-55 -50 -45

Pro Val His Ile Phe Leu Lys Pro Asn Ser Asn Glu Ile Gly Lys Val
-40 -35 -30

Glu Ser Ala Ser Pro Glu Asp Val Arg Tyr Phe Lys Thr Ile Leu Thr
-25 -20 -15 -10

Lys Glu Val Lys Gly Gln Thr Asn Lys Leu Ala Ser Val Ile Pro Asp
-5 -1 1 5

Val Ala Thr Leu Asn Ser Leu Phe Asn Gln Ile Lys Asn Gln Ser Cys
10 15 20

Gly Thr Ser Thr Ala Ser Ser Pro Cys Ile Thr Phe Arg Tyr Pro Val
25 30 35

Asp Gly Cys Tyr Ala Arg Ala His Lys Met Arg Gln Ile Leu Met Asn
40 45 50 55

Asn Gly Tyr Asp Cys Glu Lys Gln Phe Val Tyr Gly Asn Leu Lys Ala
60 65 70

Ser Thr Gly Thr Cys Cys Val Ala Trp Ser Tyr His Val Ala Ile Leu
75 80 85

004007 692266

Val Ser Tyr Lys Asn Ala Ser Gly Val Thr Glu Lys Arg Ile Ile Asp
90 95 100

Pro Ser Leu Phe Ser Ser Gly Pro Val Thr Asp Thr Ala Trp Arg Asn
105 110 115

Ala Cys Val Asn Thr Ser Cys Gly Ser Ala Ser Val Ser Ser Tyr Ala
120 125 130 135

Asn Thr Ala Gly Asn Val Tyr Tyr Arg Ser Pro Ser Asn Ser Tyr Leu
140 145 150

Tyr Asp Asn Asn Leu Ile Asn Thr Asn Cys Val Leu Thr Lys Phe Ser
155 160 165

Leu Leu Ser Gly Cys Ser Pro Ser Pro Ala Pro Asp Val Ser Ser Cys
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Gly Phe
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